

FIG. 1

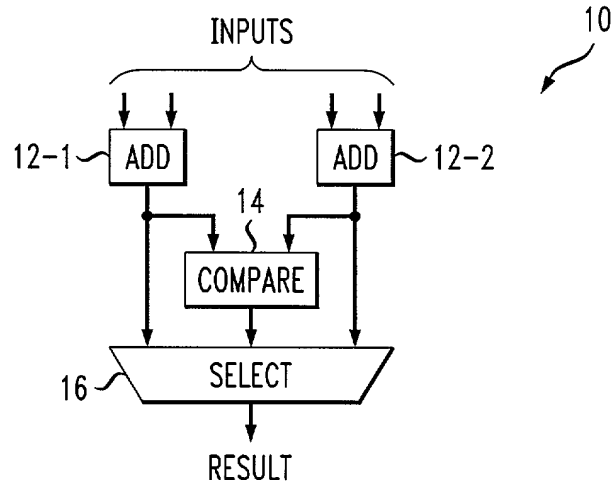


FIG. 2

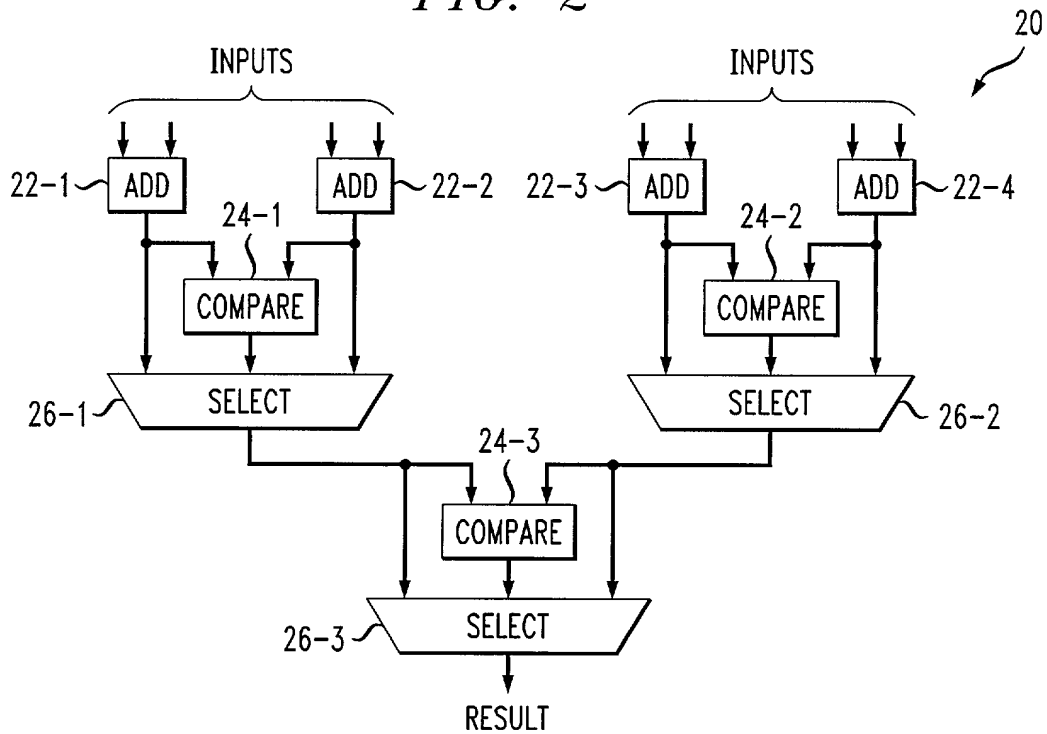


FIG. 3

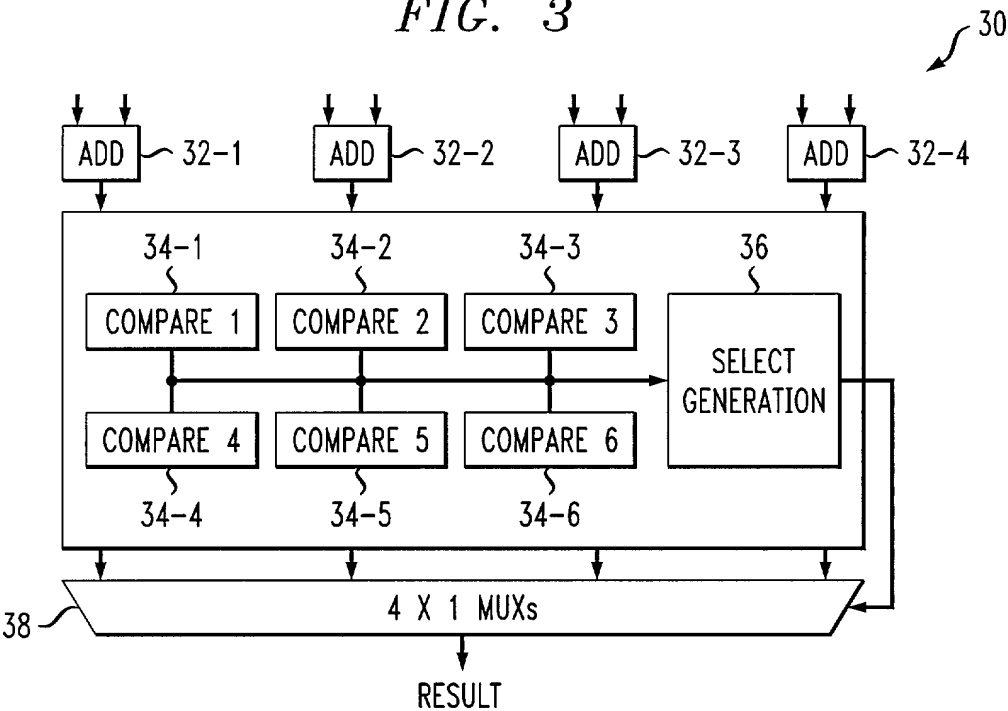


FIG. 4A

0	a7	a6	a5	a4	a3	a2	a1	a0	a
0	b7	b6	b5	b4	b3	b2	b1	b0	b
1	c7	c6	c5	c4	c3	c2	c1	c0	c
1	d7	d6	d5	d4	d3	d2	d1	d0	d
								1	CORRECTION BIT

FIG. 4B

Cout(0)	Cout(1)	REMARKS
0	0	$p < q$
0	1	$p = q \rightarrow p - q = 0$
1	0	IMPOSSIBLE
1	1	$p > q$

FIG. 4C

	t7'	s7	s6	s5	s4	s3	s2	s1	ϕ
1	t7	t6	t5	t4	t3	t2	t1	t0	

FIG. 4D

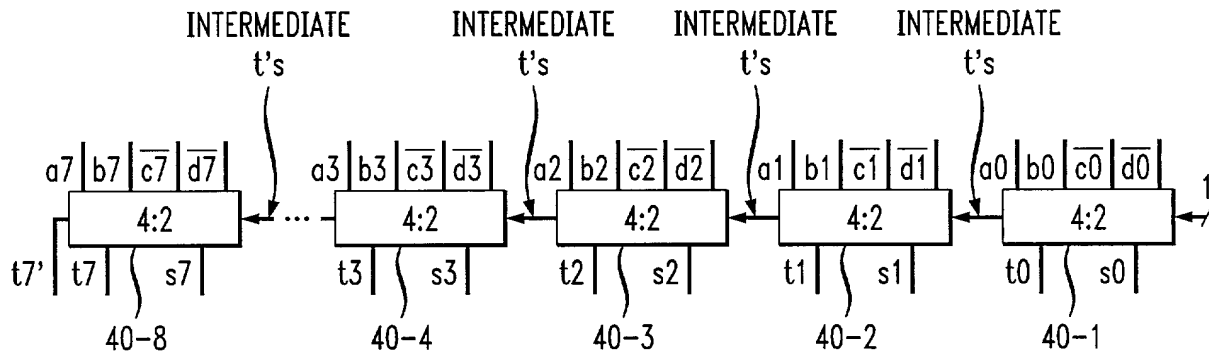


FIG. 4E

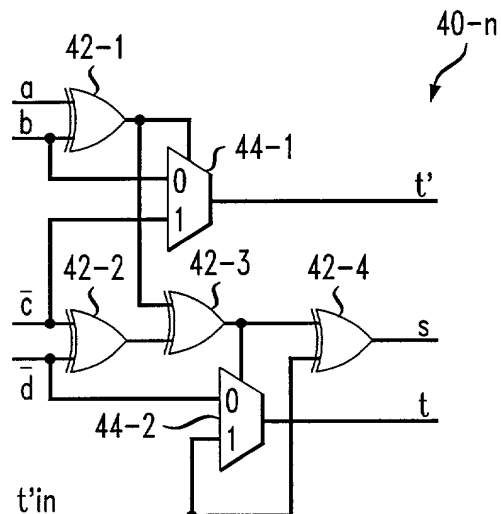


FIG. 4F

INPUT a		1	1	0	0	0	1	1	0
INPUT b		0	0	1	1	1	0	0	1
INPUT c		1	1	1	1	0	0	0	0
INPUT d		0	0	0	0	1	0	0	0
THE NEXT 4 ROWS REPRESENT THE INPUTS OF 4:2 COMPRESSION LOGIC, ANALOGOUS TO THAT REPRESENTED BY FIGURE 4A									
INPUT a		0	1	1	0	0	0	1	1
INPUT b		0	0	0	1	1	1	0	0
INPUT \bar{c}		1	0	0	0	0	1	1	1
INPUT \bar{d}		1	1	1	1	1	0	1	1
CORRECTION BIT									1
t' BITS (SHADED BITS ARE INTERNAL TO THE NETWORK OF 4:2 COMPRESSORS, THE UNSHADED BIT IS t')		0	0	0	0	1	1	1	1
s BITS		0	0	0	1	1	0	0	0
t BITS		1	1	1	1	0	1	1	1
OUTPUT OF 4:2 COMPRESSION NETWORK; s, t BIT VECTORS: CARRY OUTPUT FROM THE MSB INDICATES THE RELATIVE MAGNITUDES OF a + b AND c + d. IN THIS CASE, Cout = 1 WHICH IMPLIES a + b > c + d		0	0	0	0	1	1	0	0
		1	1	1	1	0	1	1	1

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FIG. 4G

INPUT a		1	1	0	0	0	1	1	0	
INPUT b		0	0	1	1	1	0	0	1	
INPUT c		1	1	1	1	0	0	0	0	
INPUT d		0	0	0	0	1	1	1	1	
THE NEXT 4 ROWS REPRESENT THE INPUTS OF 4:2 COMPRESSION LOGIC, ANALOGOUS TO THAT REPRESENTED BY FIGURE 4A										
INPUT a		0	1	1	0	0	0	1	1	0
INPUT b		0	0	0	1	1	1	0	0	1
INPUT \bar{c}		1	0	0	0	0	1	1	1	1
INPUT \bar{d}		1	1	1	1	1	0	0	0	0
CORRECTION BIT										1
t' BITS (SHADED BITS ARE INTERNAL TO THE NETWORK OF 4:2 COMPRESSORS, THE UNSHADED BIT IS t')		0	0	0	0	1	1	1	1	1
s BITS			0	0	0	1	1	1	1	1
t BITS		1	1	1	1	0	0	0	0	
OUTPUT OF 4:2 COMPRESSION NETWORK; s, t BIT VECTORS: CARRY OUTPUT FROM THE MSB INDICATES THE RELATIVE MAGNITUDES OF a + b AND c + d. IN THIS CASE, Cout = 0 WHICH IMPLIES a + b ≤ c + d (CONDITIONAL CARRIES Cout(0) = 0 AND Cout(1) = 1 IN THIS CASE)		0	0	0	0	1	1	1	1	ϕ
		1	1	1	1	0	0	0	0	

FIG. 5

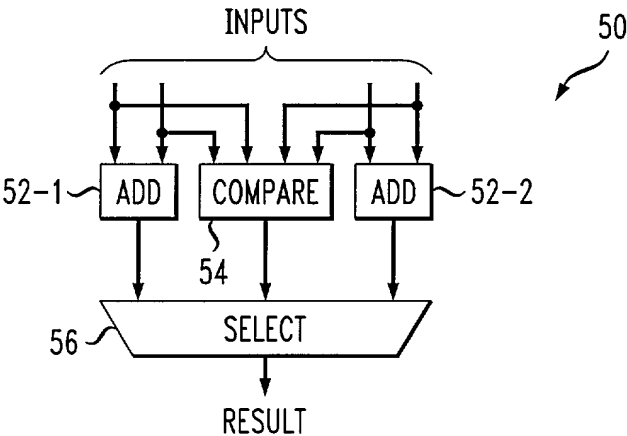


FIG. 6

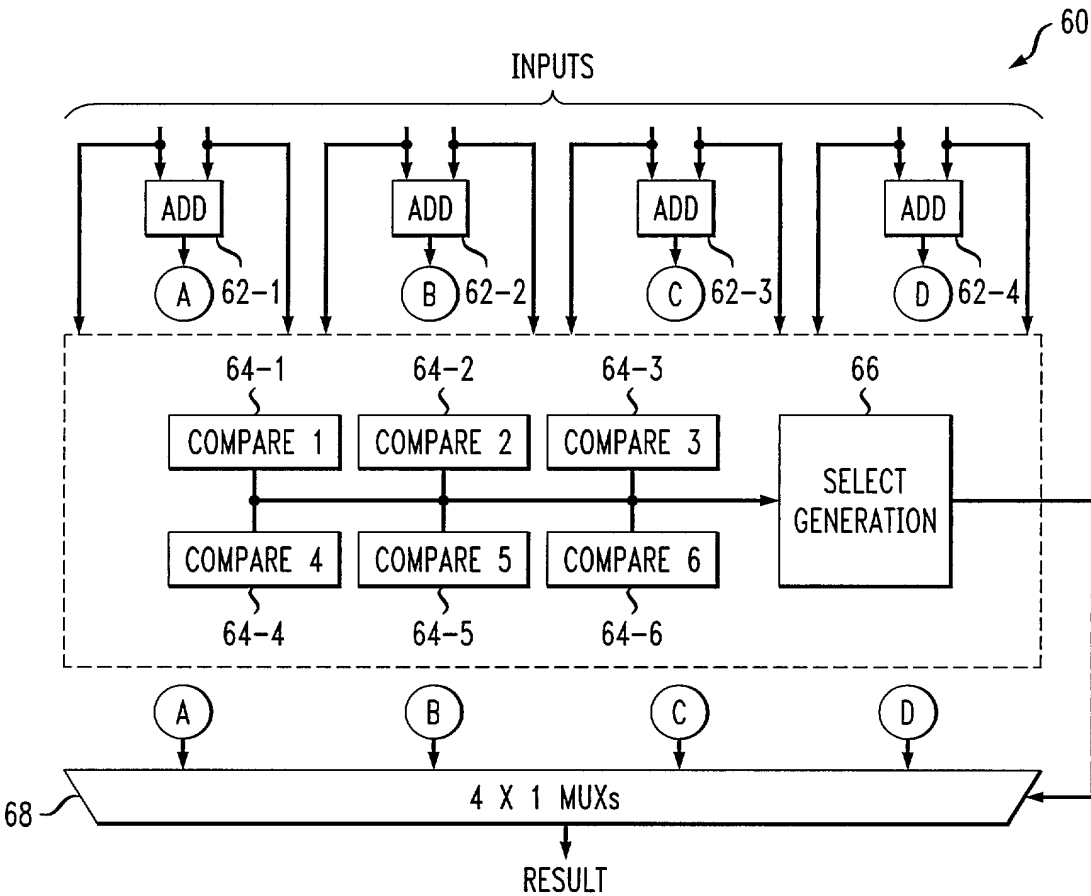


FIG. 7A

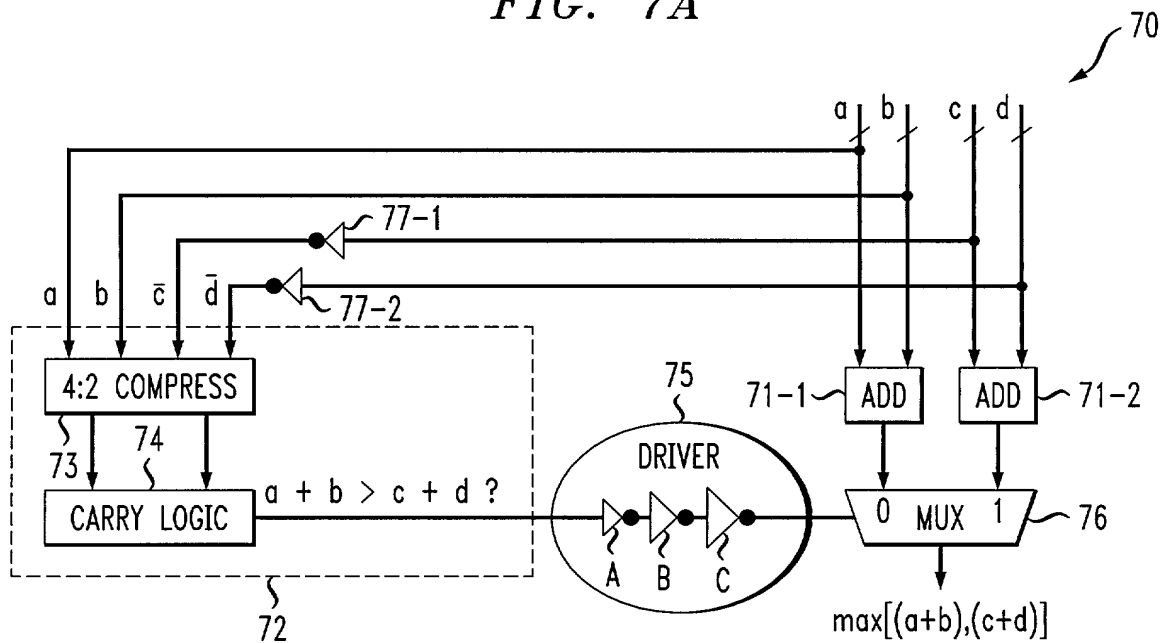


FIG. 7B

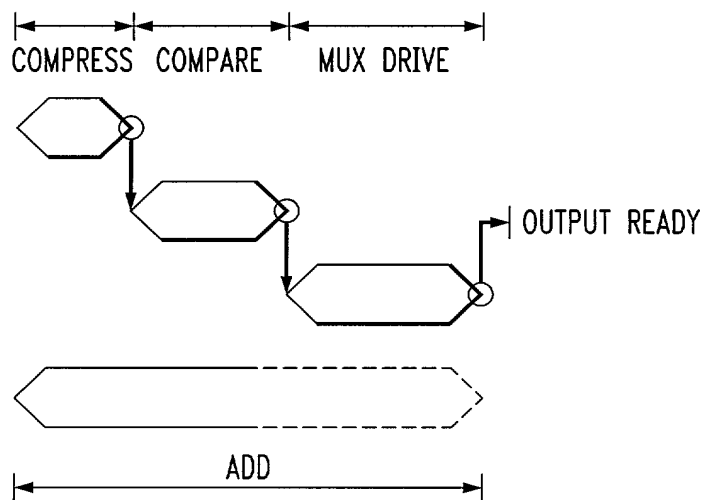


FIG. 8

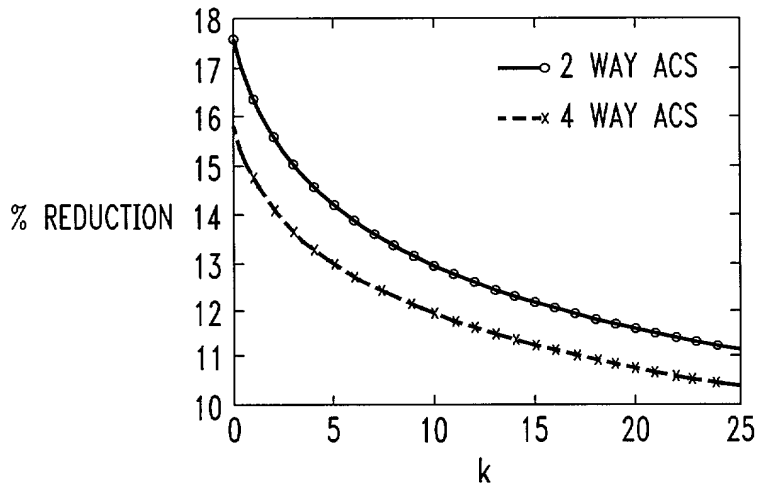


FIG. 9

